

**Commonwealth of Kentucky**  
**Division for Air Quality**  
***PERMIT STATEMENT OF BASIS***

Federally-Enforceable Synthetic Minor/Title V Draft Revised Permit

No. V-99-051 (Revision III)

RIVERSIDE GENERATING COMPANY

ROUTE 2

CATLETTSBURG, KY

March 11, 2002

B. MARKIN-PERMIT ENGINEER

a. Source Description:

Riverside Generating Company of Houston, Texas is proposing a minor modification at their permitted source located in Lawrence County, Kentucky near Catlettsburg. The modification will include construction/operation of 605 hp (400kW) emergency diesel generator operating at 250 hours per year and reducing the hours of operation on the combustion turbines to 4580 hour per year; reducing source-wide emission from 249 to 245 tons per year.

b. Facility Location and Attainment Status:

This facility is located in Lawrence County, Kentucky. Lawrence County is classified as attainment or cannot be classified for all criteria pollutants.

c. Comments:

1. Emission factors and their source:

The emissions cap of 245 tons per year source wide is to be implemented for nitrogen oxides and carbon monoxide in order to preclude Regulation 401 KAR 51:017, Prevention of significant deterioration of air quality. The emergency generator emission factors are manufacturer guaranteed and will operate for 250 hours per year. The emergency generator sulfur dioxide emissions are based on diesel fuel sulfur content of 0.5 %.

2. Applicable regulations for new emergency generator:

NA

3. Synthetic Minor - Pollutants and Emission Limitations:

Specifically, the current synthetic minor permitted facility has the potential to become a PSD from regulated air pollutants. However, the permittee has agreed in addition to the minor modifications, an emissions cap of 245 tons per year source wide; a reduction from the initial 249 tons per year, based on any 12 consecutive months, for both nitrogen oxides, carbon monoxide and HAPs to preclude Regulation 401 KAR 51:017. The permittee will assure compliance for each pollutant with use of continuous emission monitors, a calculation procedure based on EPA methods, and a monthly tracking of total emissions. Sulfur content of natural gas fuel is being limited to the amount proposed in the application of 1.0 grain/100 SCF in order to preclude Regulation

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401 KAR 51:017 also. This is necessary because the NSPS (40 CFR 60 Subpart GG) limitation of 0.8 weight percent sulfur in fuel would result in potential emissions greater than PSD thresholds. Hazardous air pollutant (HAP) emissions are estimated to be less than 10 tons/year of a single one, and less than 25 tons/year of any combination of HAPs, given the limitations necessary to maintain the emissions caps for nitrogen oxides and carbon monoxide, estimated for 4580 hours of operation, total, for all turbines and natural gas heater.

The permittee shall assure compliance by calculating HAP emissions and tracking and totaling emissions assuring Title V thresholds are not exceeded.

4. Synthetic Minor - Control Device Requirements:

The permittee will operate dry low-nitrogen oxide burners with each gas-fired combustion turbine to attain a 20 ppmvd at 15 % oxygen NO<sub>x</sub> emission level.

d. Conclusion:

With this construction, Riverside Generating Company potential nitrogen oxides and carbon monoxide emissions for this project are effectively limited to 245 tons per year source wide from the initial 249 ton per year for each pollutant from the combustion turbines, emergency generators and natural gas heater, thus precluding a NSR/PSD review. The total operation time for the project shall not exceed 4580 on a twelve month rolling total. The sulfur content of natural gas fuel is also limited below the 40 CFR 60 Subpart GG level to assure that NSR/PSD review is precluded. Hazardous air pollutants' emissions should inherently be less than Title V levels given the limitations and operations necessary to achieve the nitrogen oxides and carbon monoxide emission levels.

**CREDIBLE EVIDENCE:**

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements.

At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.